

SEQUENCE LISTING

<110> Ono, Toshio  
Nakayama, Ichiro

<120> CANCER ASSOCIATED ANTIGENS AND USES  
THEREFOR

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<140> US 09/559,013

<141> 2000-04-26

<150> US 60/168,353

<151> 1999-12-01

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SEP 26 2001  
TECH CENTER 1600/2900

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 Asp Lys Asn Lys Met Gly Leu Lys Gly Pro Leu Lys Thr Pro Ile Ala  
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<213> Mus musculus

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<400> 11

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	catctcatcc	agggttgccg	cttgatgtgt	ggggatgatg	accatatact	tagggatgtc	360
	atagccggag	atgctgctag	ccctagtgtg	acgatggggc	aaggccaagg	gcaccacagg	420
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 <212> PRT  
 <213> Mus musculus

<400> 12

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 35 40 45  
 Leu Leu Gly Leu Thr Gln Lys Leu Gly Pro Ile Tyr Arg Ile Arg Leu  
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 25 Gly Met Gln Asp Val Val Leu Asn Ser Asn Arg Thr Ile Glu Glu  
 65 70 75 80  
 Ala Leu Ile Gln Lys Trp Val Asp Phe Ala Gly Arg Pro His Met Leu  
 85 90 95  
 C1 30 Asn Gly Lys Met Asp Leu Asp Leu Ser Leu Gly Asp Tyr Ser Leu Met  
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 Trp Lys Ala His Lys Lys Leu Ser Arg Ser Ala Leu Met Leu Gly Met  
 115 120 125  
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 130 135 140  
 35 Glu Arg Met Arg Ala Gln Ala Gly Thr Pro Val Ala Ile His Lys Glu  
 145 150 155 160  
 Phe Ser Phe Leu Thr Cys Ser Ile Ile Ser Cys Leu Thr Phe Gly Asp  
 165 170 175  
 40 Lys Asp Ser Thr Leu Val Gln Thr Leu His Asp Cys Val Gln Asp Leu  
 180 185 190  
 Leu Gln Ala Trp Asn His Trp Ser Ile Gln Ile Leu Thr Ile Ile Pro  
 195 200 205  
 Leu Leu Arg Phe Leu Pro Asn Pro Gly Leu Gln Lys Leu Lys Gln Ile  
 210 215 220  
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 225 230 235 240  
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 245 250 255  
 50 Gln Gly Val Glu Lys Gln Arg Asp Gly Lys Asp Glu Glu Arg Leu His  
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 Glu Gly His Val His Met Ser Val Val Asp Leu Phe Ile Gly Gly Thr  
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 Glu Thr Thr Ala Thr Thr Leu Ser Trp Ala Val Ala Phe Leu Leu His  
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 55 His Pro Glu Ile Gln Lys Arg Leu Gln Glu Glu Leu Asp Leu Lys Leu  
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 Gly Pro Gly Ser Gln Leu Leu Tyr Arg Asn Arg Met Gln Leu Pro Leu  
 325 330 335  
 60 Leu Met Ala Thr Ile Ala Glu Val Leu Arg Leu Arg Pro Val Val Pro  
 340 345 350  
 Leu Ala Leu Pro His Arg Ala Thr Arg Ala Ser Ser Ile Ser Gly Tyr  
 355 360 365

Asp Ile Pro Lys Asp Met Val Ile Ile Pro Asn Ile Gln Gly Ala Asn  
 370 375 380  
 Leu Asp Glu Met Val Trp Glu Leu Pro Ser Lys Phe Trp Pro Asp Arg  
 385 390 395 400  
 5 Phe Leu Glu Pro Gly Lys Asn Pro Arg Thr Pro Ser Phe Gly Cys Gly  
 405 410 415  
 Ala Arg Val Cys Leu Gly Glu Pro Leu Ala Arg Leu Glu Leu Phe Val  
 420 425 430  
 Val Leu Ala Arg Leu Leu Gln Ala Phe Thr Leu Leu Pro Pro Asp  
 435 440 445  
 10 Gly Thr Leu Pro Ser Leu Gln Pro Gln Pro Tyr Ala Gly Ile Asn Leu  
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 <213> Mus musculus

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 <213> Mus musculus

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 Val Asp Gly Lys Leu Val Lys Ala Ser Phe Ala Pro Ile Ser Phe Ala  
 50 55 60  
 55 Ile Lys Ala Met Lys Glu Gly Arg Tyr Thr Val Leu Ala Glu Ser Lys  
 65 70 75 80  
 Asn Glu Glu Lys Lys Ser Gly Pro Thr Ser Asp Asn Glu Glu Glu  
 85 90 95  
 60 Asp Asp Glu Glu Asp Gly Ser Tyr Leu His Pro Ser Leu Phe Ala Ser  
 100 105 110  
 Lys Lys Ser Ser Arg Leu Glu Glu Leu Met Lys Pro Leu Lys Val Val

115 120 125  
 Asp Pro Asp His Pro Leu Ala Leu Cys Pro Glu Ser Thr Lys Leu  
 130 135 140  
 Thr Ala His Ser Gln Pro His Pro Asn Leu Gln Glu Trp Gly Pro Arg  
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 ggccatggaa gacgaatttg ggtttgaaat tcctgatata gatgcagaga agttaatgtg 420  
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 35 40 45  
 45 Ile Met Ala Met Glu Asp Glu Phe Gly Phe Glu Ile Pro Asp Ile Asp  
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 ctaaagagag agaaacaaag cgtgggaaat ttaaaaaaaaa aaccacaga gaaacaatgg 960  
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 Val Glu Ser Pro Pro Ala Ala Arg Cys Ser Ala Arg Arg Ala Glu Leu  
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 Leu Pro Gly Ala Leu Val Leu Asn Leu Gln  
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 40 <213> Mus musculus

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	Ala	His	Ser	Leu	Arg	Ser	Ser	Pro	Ala	Trp	Gly	Gly	Val	Val	Thr	Leu	
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5	His	Arg	Lys	Glu	Gly	Asp	Ser	Glu	Phe	Met	Asn	Ile	Ile	Ala	Asn	Glu	
		65				70					75					80	
	Ile	Gly	Ser	Glu	Glu	Thr	Leu	Leu	Phe	Leu	Thr	Val	Gly	Asp	Glu	Lys	
				85					90						95		
10	Gly	Ala	Gly	Leu	Phe	Leu	Leu	Ala	Gly	Pro	Ala	Glu	Ala	Val	Glu	Thr	
				100					105					110			
	Leu	Gly	Pro	Arg	Val	Ala	Glu	Val	Leu	Glu	Gly	Lys	Gly	Ala	Gly	Lys	
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	Lys	Gly	Arg	Phe	Gln	Gly	Lys	Ala	Thr	Lys	Met	Ser	Arg	Arg	Ala	Glu	
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	Met Arg Lys																
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50	Pro	Ala	Ala	Gly	Phe	Leu	Pro	Ser	Leu	Leu	Lys	Val	Leu	Leu	Leu	Pro	
	5						10					15					
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	Leu	Ala	Pro	Ala	Ala	Ala	Gln	Asp	Ser	Thr	Gln	Ala	Pro	Thr	Pro	Gly	
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	Ser	Pro	Leu	Ser	Pro	Thr	Glu	Tyr	Glu	Arg	Phe	Phe	Ala	Leu	Leu	Thr	
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	Cys	Arg	Asn	Pro	Thr	Leu	Val	Gln	Leu	Asp	Gln	Tyr	Glu	Asn	His	Gly					
			70					75					80								
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	Leu	Val	Pro	Asp	Gly	Ala	Val	Cys	Ser	Asn	Leu	Pro	Tyr	Ala	Ser	Trp					
		85					90					95									
15	ttt	gag	tct	ttc	tgc	cag	ttc	act	cac	tac	cgt	tgc	tcc	aac	cac	gtc	393				
	Phe	Glu	Ser	Phe	Cys	Gln	Phe	Thr	His	Tyr	Arg	Cys	Ser	Asn	His	Val					
	100					105					110					115					
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	Pro	Asn	Thr	Leu	Lys	Glu	Ile	Glu	Ala	Ser	Ala	Glu	Val	Ser	Pro	Thr					
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			150					155					160								
35	acc	ttc	cag	ccc	tgg	cct	gag	agg	ctc	agc	aac	aac	gtg	gaa	gag	ctc	585				
	Thr	Phe	Gln	Pro	Trp	Pro	Glu	Arg	Leu	Ser	Asn	Asn	Val	Glu	Glu	Leu					
		165					170					175									
40	cta	caa	tcc	tcc	ttg	tcc	ctg	gga	ggc	cag	gag	caa	gcg	cca	gag	cac	633				
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		180				185					190					195					
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	Lys	Gln	Glu	Gln	Gly	Val	Glu	His	Arg	Gln	Glu	Pro	Thr	Gln	Glu	His					
					200				205						210						
50	aag	cag	gaa	gag	ggg	cag	aaa	cag	gaa	gag	caa	gaa	gag	gaa	cag	gaa	729				
	Lys	Gln	Glu	Glu	Gly	Gln	Lys	Gln	Glu	Glu	Gln	Glu	Glu	Glu	Gln	Glu					
				215				220						225							
55	gag	gag	gga	aag	cag	gaa	gaa	gga	cag	ggg	act	aag	gag	gga	cgg	gag	777				
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			230					235					240								
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	Ala	Val	Ser	Gln	Leu	Gln	Thr	Asp	Ser	Glu	Pro	Lys	Phe	His	Ser	Glu					
			245				250					255									
65	tct	cta	tct	tct	aac	cct	tcc	tct	ttt	gct	ccc	cgg	gta	cga	gaa	gta	873				
	Ser	Leu	Ser	Ser	Asn	Pro	Ser	Ser	Phe	Ala	Pro	Arg	Val	Arg	Glu	Val					
		260				265					270					275					
70	gag	tct	act	cct	atg	ata	atg	gag	aac	atc	cag	gag	ctc	att	cga	tca	921				
	Glu	Ser	Thr	Pro	Met	Ile	Met	Glu	Asn	Ile	Gln	Glu	Leu	Ile	Arg	Ser					
					280					285					290						
75	gcc	cag	gaa	ata	gat	gaa	atg	aat	gaa	ata	tat	gat	gag	aac	tcc	tac	969				
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				295					300					305							

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5	gcc ttg ctg gtg ctg tgc tat tgc atc gtg gag aat acc tgc atc ata	1065
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	325 330 335	
10	acc ccc aca gcc aag gcc tgg aag tac atg gag gag gag atc ctt ggt	1113
	Thr Pro Thr Ala Lys Ala Trp Lys Tyr Met Glu Glu Glu Ile Leu Gly	
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15	ttc ggg aag tgc gtc tgt gac agc ctt ggg cgg cga cac atg tct acc	1161
	Phe Gly Lys Ser Val Cys Asp Ser Leu Gly Arg Arg His Met Ser Thr	
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20	tgt gcc ctc tgt gac ttc tgc tcc ttg aag ctg gag cag tgc cac tca	1209
	Cys Ala Leu Cys Asp Phe Cys Ser Leu Lys Leu Glu Gln Cys His Ser	
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	gag gcc agc ctg cag cgg caa caa tgc gac acc tcc cac aag act ccc	1257
	Glu Ala Ser Leu Gln Arg Gln Gln Cys Asp Thr Ser His Lys Thr Pro	
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5 Lys Gly Cys Glu Asp Val Arg Val Ser Gly Trp Leu Gln Thr Glu Phe  
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